

WHAT IS CLAIMED IS:

1. A color image forming apparatus having:
color measuring means for applying light to
images of respective developer colors formed on a
5 transferring material, and detecting reflected light
from said images by an optical sensor;
setting means for variably setting a detecting
condition of said color measuring means in conformity
with predicted reflectance; and
10 control means for adjusting an image forming
condition on a basis of the reflected light detected
by said color measuring means in accordance with said
detecting condition set by said setting means.
- 15 2. A color image forming apparatus according to
Claim 1, wherein said detecting condition is an
amount of light of a light source.
- 20 3. A color image forming apparatus according to
Claim 1, wherein said detecting condition is an
accumulation time of an accumulation type sensor.
- 25 4. A color image forming apparatus according to
Claim 1, wherein said detecting condition is an
accumulation time of an accumulation type sensor and
a length of the detected images along a conveyance
direction.

5. A color image forming apparatus according to Claim 2, wherein the amount of light of the light source as said detecting condition is changeable so as to be decreased as the predicted reflectance becomes greater and to be increased as the predicted reflectance becomes smaller.

6. A color image forming apparatus according to Claim 3, wherein the accumulation time as said detecting condition is changeable so as to be decreased as the predicted reflectance becomes greater, and to be increased as the predicted reflectance becomes smaller.

7. A color image forming apparatus according to Claim 4, wherein the length of the detected image along the conveyance direction as said detecting condition is shortened as the predicted reflectance becomes greater, and is lengthened as the predicted reflectance becomes smaller.

8. A color image forming apparatus according to Claim 1, wherein said color measuring means is provided with a light source having a spectrum over an entire visible light, and a sensor comprising pixels provided with three or more filters having a spectral characteristic.

9. A color image forming apparatus according to Claim 1, wherein said color measuring means is provided with three or more light sources having difference spectra and one or more sensors.

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10. A color image forming apparatus according to Claim 1, wherein said color measuring means is provided with a light source having a spectrum over an entire visible light, and a sensor comprising
10 means for separating the reflected light from the images and a plurality of pixels for measuring the intensity of the separated lights.

11. A color image forming apparatus according
15 to Claim 1, wherein said color measuring means is provided with three or more light sources having different spectra, and one or more sensors, and when said light sources are turned on one by one and reflected lights corresponding to the respective
20 light sources are detected by the sensor or sensors, the amount of light of each light source is changed in conformity with predicted spectral reflectance.

12. A color image forming apparatus according
25 to Claim 1, wherein said setting means, when it sets said detecting condition, effects the setting of said detecting condition in conformity with the actually

measured reflectance of the images, in addition to the predicted reflectance.

13. A color measurement controlling method for
5 a color image forming apparatus having:

a color measuring step of applying light to images of respective developer colors formed on a transferring material, and detecting reflected light from the images by an optical sensor;

10 a setting step of variably setting a detecting condition of said color measuring step for each developer color in conformity with predicted reflectance; and

a controlling step of adjusting an image
15 forming condition on a basis of the reflected light detected at said color measuring step in accordance with the detecting condition variably set by said setting step.

20 14. A color measurement controlling method according to Claim 13, wherein said detecting condition is an amount of light of a light source.

15 15. A color measurement controlling method according to Claim 13, wherein said detecting condition is an accumulation time of an accumulation type sensor.

16. A color measurement controlling method
according to Claim 13, wherein said detecting
condition is an accumulation time of an accumulation
type sensor and a length of the detected images along
5 a conveyance direction.

17. A color measurement controlling method
according to Claim 14, wherein the amount of light of
the light source as said detecting condition is
10 decreased as the predicted reflectance becomes
greater, and is increased as the predicted
reflectance becomes smaller.

18. A color measurement controlling method
15 according to Claim 15, wherein the accumulation time
as said detecting condition is decreased as the
predicted reflectance becomes greater, and is
increased as the predicted reflectance becomes
smaller.

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19. A color measurement controlling method
according to Claim 16, wherein the length of the
image along the conveyance direction as said
detecting condition is shortened as the predicted
25 reflectance becomes greater, and is lengthened as the
predicted reflectance becomes smaller.

20. A color measurement controlling method according to Claim 13, wherein said color measuring step is executed by a light source having a spectrum over an entire visible light, and a sensor comprising
5 pixels provided with three or more filters having a spectral characteristic.

21. A color measurement controlling method according to Claim 13, wherein said color measuring
10 step is executed by three or more light sources having different spectra, and one or more sensors.

22. A color measurement controlling method according to Claim 13, wherein said color measuring
15 step is executed by a light source having a spectrum over an entire visible light, and a sensor comprising means for separating the reflected light from the images and a plurality of pixels for measuring the intensities of the separated lights.

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23. A color measurement controlling method according to Claim 13, wherein said color measuring step is executed by three or more light sources having different spectra, and one or more sensors,
25 and includes a step of turning on the light sources one by one and changing the amount of light of each light source in conformity with the predicted

spectral reflectance when the reflected lights corresponding to the respective light sources are detected by the sensor or sensors.

- 5 24. A color measurement controlling method according to Claim 13, wherein in case of the setting of said detecting condition at said setting step, the setting of said detecting condition is effected in conformity with the actually measured reflectances of
10 the images, in addition to the predicted reflectance.